

Ichthyology Summary 7

Last week, our class took a field trip to Biosphere II, where we participated in a mark-recapture survey with fish living in the mangrove habitat. Decades ago when the building was constructed, several species of fish were placed in the waters of the mangrove habitat. About thirty years have passed, and nobody had checked on the fish at all. It was unsure how many and which species of fish were still in there, if any at all. On the Tuesday of that week, a few people went over there to set up some Promar traps designed to catch relatively small fish. Those types of traps are nice to use in the field because they are collapsable and transportable. They set up the traps, baited them with dog food, and hoped for the best. We were unsure if we would get any fish because we had no idea what was happening in that pond.

The following day, half the class went to Biosphere II to check the traps. To everyone's joy, most of the traps had at least one fish. We quickly got to work pulling the traps and observing the fish. I was one of the people who measured and marked them. All of the fish were of the same species, which was later identified as *Fundulus heteroclitus*. I measured each fish in millimeters, then clipped off a small portion of the top of their caudal fin. The fish do not have nerves there, so it did not hurt them. We caught 30 individuals total. After recording all of the data, the fish were released back into the spots where they were caught, and we reset the traps.

After giving the fish a day to recover, we went back to Biosphere II on Friday. We did the same over again, this time also noting if the fish had marks or not. We caught 30 individuals again and 18 of them were marked. Using a simple equation, we estimated the population size to be about 50-51. One of my classmates also noticed some juveniles swimming in the habitat, which means reproduction is occurring. We did not catch any juveniles because they are too small and can fit through the holes of the trap. Because it was the last day, we did not reset the

traps again and instead took everything home. We also got to witness a quick electrofishing demonstration because some of the koi fish in the rainforest habitat escaped their pond and into a pond that they did not belong in. It was a successful field trip, and it was nice to get some hands-on experience working with live fish.

